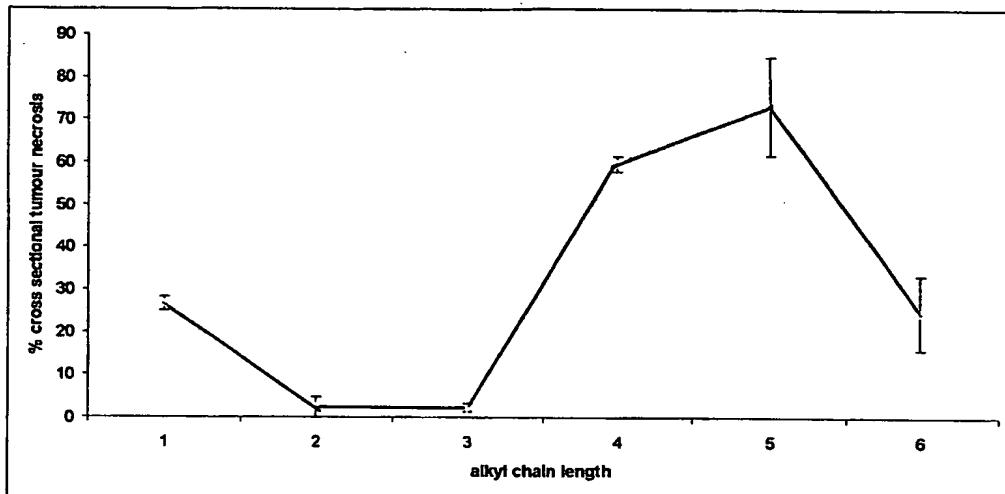


Figure 1**Symmetrical phenothiazinium salts: *in vivo* activity at 1h**

Figure shows % cross sectional tumour necrosis at 72h post-PDT. All drugs were administered i.v. at a dose of $16.7\mu\text{mol}/\text{kg}$. At 1h post drug administration light ($60\text{J}/\text{cm}^2$, $50\text{mW}/\text{cm}^2$) was administered superficially.



Symmetrical phenothiazinium salt	Alkyl chain length	Vehicle	Wavelenght (nm \pm 15)	%area	s.e.m
Methyl	1	Phys. saline	685	26.70	1.60
Ethyl	2	Phys. saline	630	2.38	2.38
Propyl	3	2%DMSO/H ₂ O	630	2.27	0.99
Butyl	4	2%DMSO/H ₂ O	660	59.74	1.78
Pentyl	5	2%DMSO/H ₂ O	685	73.31	11.57
Hexyl	6	2%DMSO/H ₂ O	660	24.71	8.74

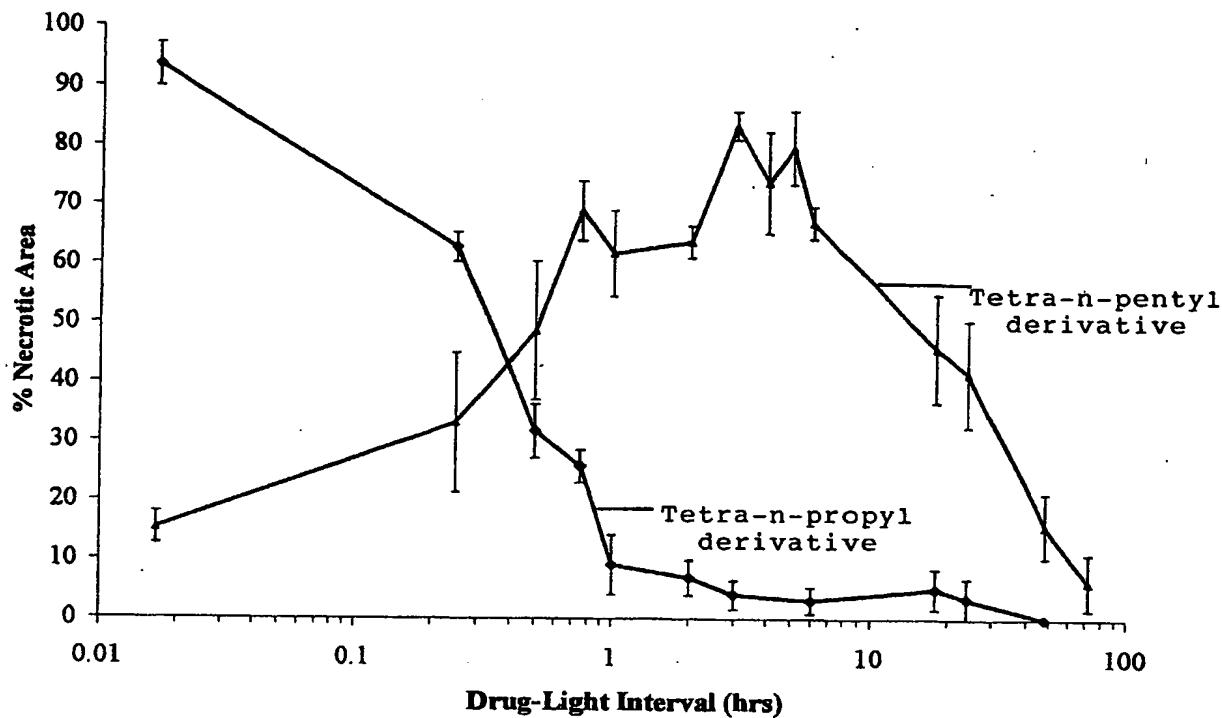


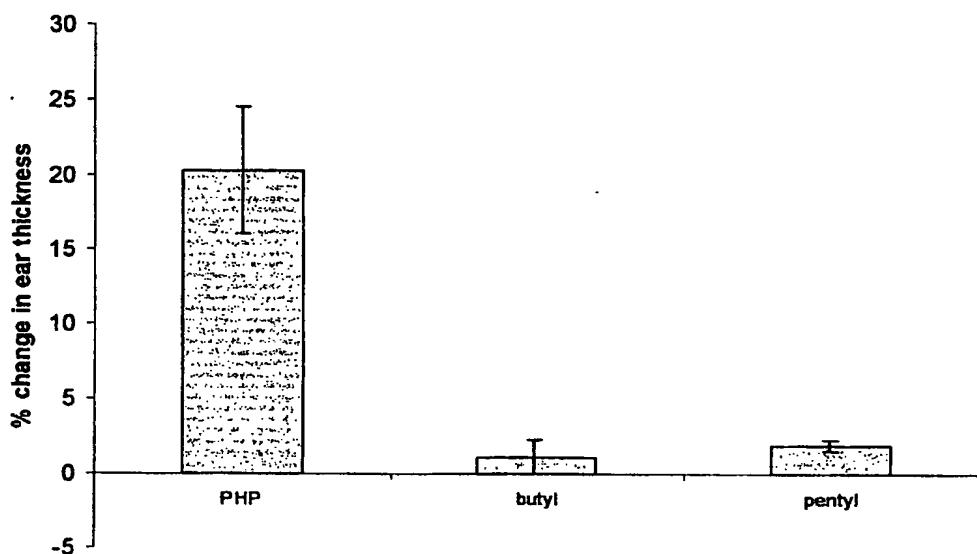
Figure 2: Area of tumour necrosis (expressed as a % total section area) 72 hrs after PDT with tetra-n-propyl and tetra-n-pentyl derivative ($16.7\mu\text{molkg}^{-1}$, 660nm light @ 50mWcm^{-2} , 60Jcm^{-2}). Data points represent mean + SEM ($n=6$, each reading measured in triplicate).

Figure 3**Skin photosensitivity- murine ear swelling response**

CBA/Gy mice were injected with sensitisier at 16.7 $\mu\text{mol/kg}$. At 24h post drug injection ears were exposed to broad band white light from a xenon arc lamp (25J/cm^2 , 30mW/cm^2). % Change in ear thickness was measured as :

(ear thickness at 24h post illumination - ear thickness pre-illumination) / ear thickness pre-illumination $\times 100$

Increased % change in ear thickness measures increased skin photosensitivity.



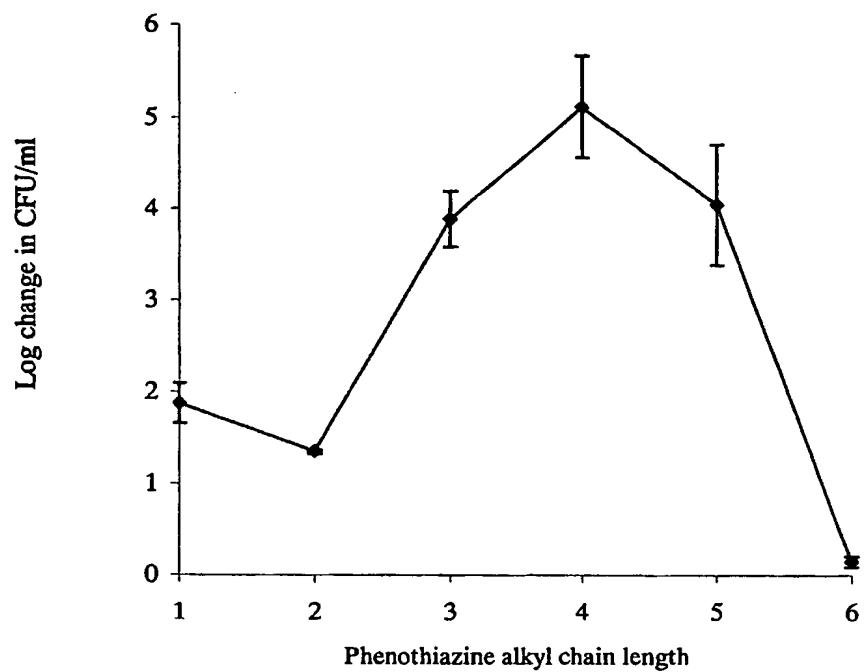


Figure 4 Log change in CFU/ml of *E.coli* incubated for 30 minutes with 10 μ M phenothiazine and illuminated for 60 minutes at 1.3mW/cm 2

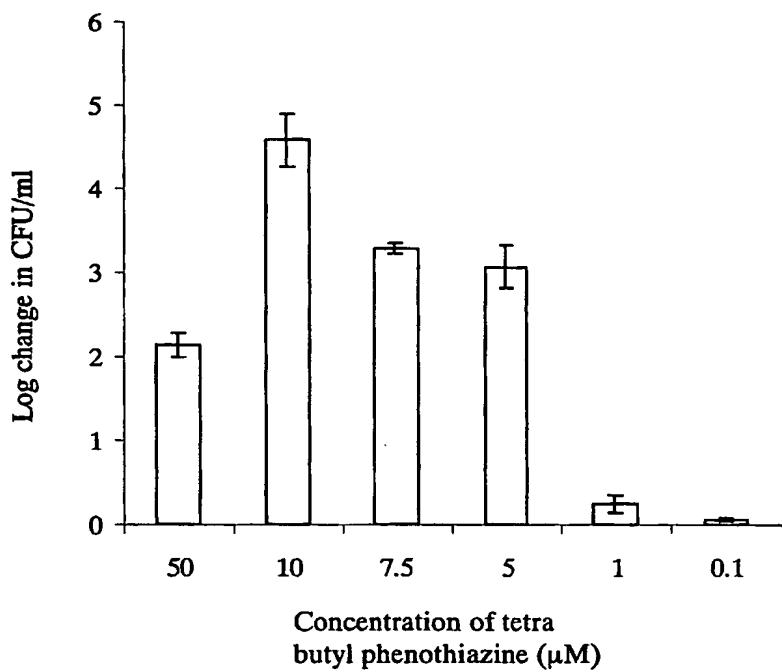


Figure 5 Log change in CFU/ml of *E. coli* incubated for 30 minutes with different concentrations of tetra butyl phenothiazine and illuminated for 15 minutes at 1.3mW/cm⁻²

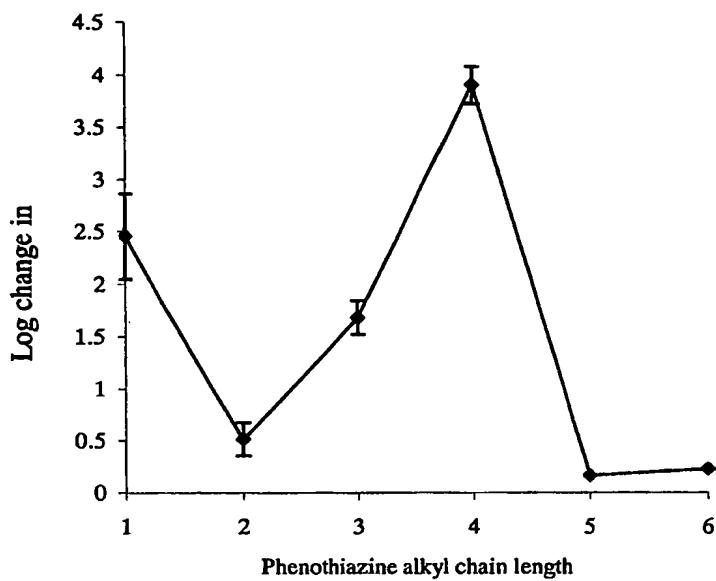


Figure 6 Log change in CFU/ml of *E. coli* in the stationary phase of growth following incubation for 30 minutes with 10 μ M phenothiazine and illuminated for 60 minutes at 1.3mWcm⁻²

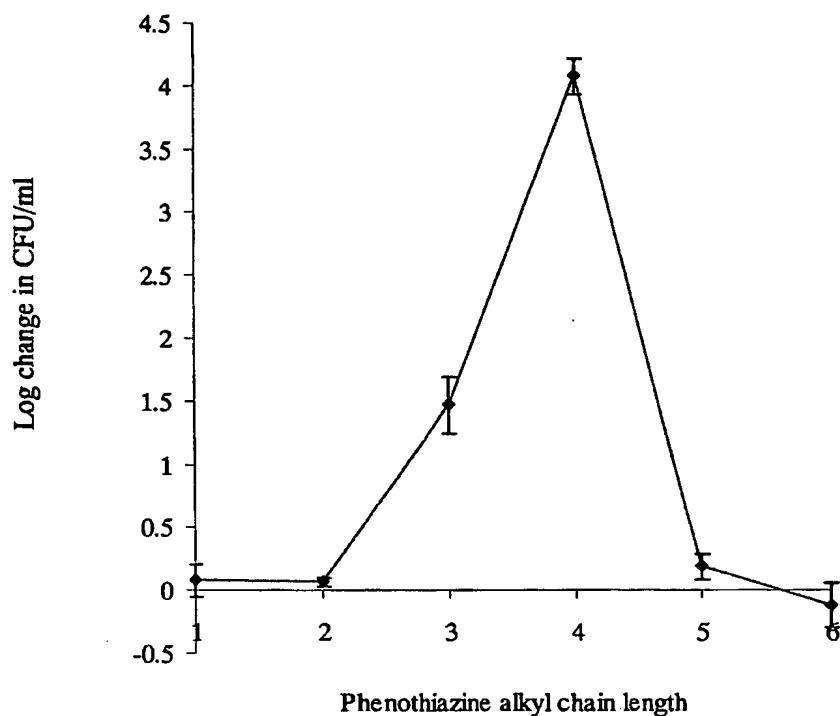


Figure 7 Log change in CFU/ml of *E.coli* resuspended in nutrient media. Cell were incubated for 30 minutes with 10 μ M phenothiazine and illuminated for 60 minutes at 1.3mW/cm²

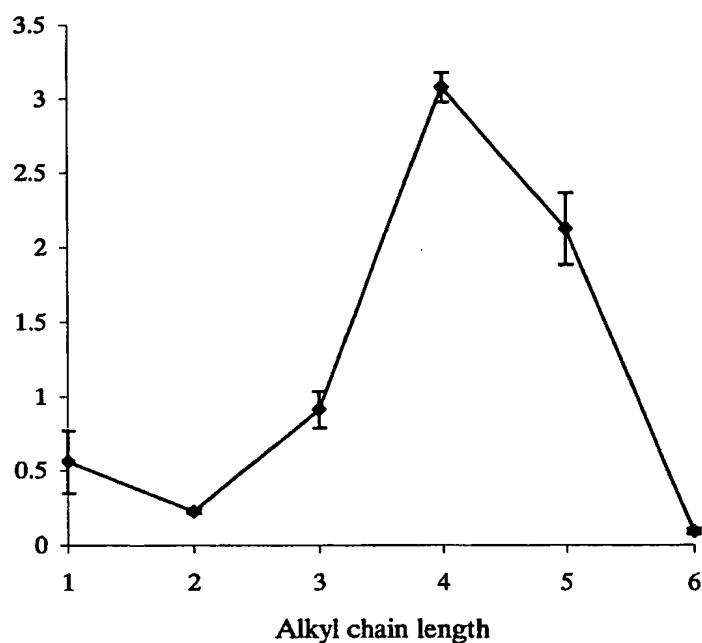


Figure 8 Log change in CFU/ml of *E. coli* following Incubation with 10 µM phenothiazine for 30 minutes. Illumination was with laser light (664nm) for 4 minutes at 0.1W

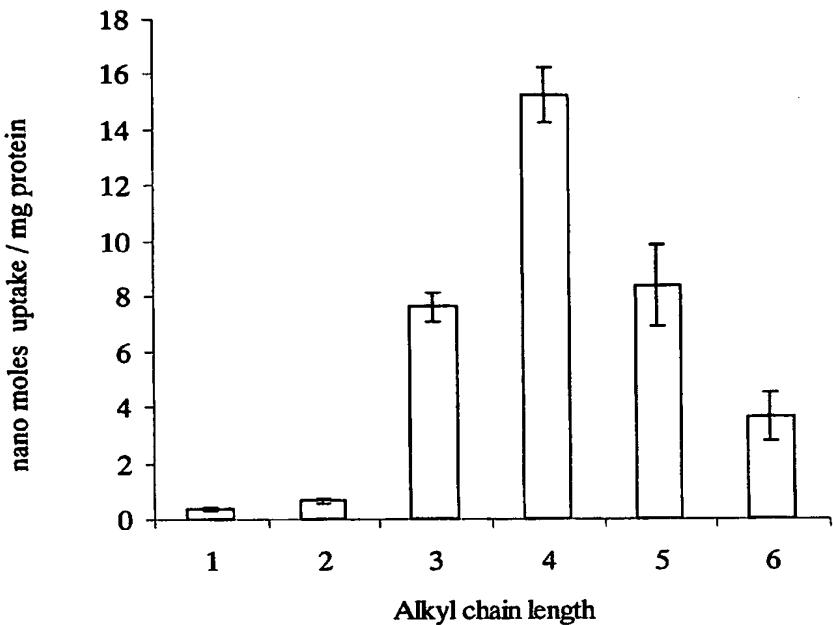


Figure 9 Uptake of 10 μ M phenothiazine into *E.coli* cells following a 30 minute incubation. Cells were washed twice in 0.1M pH7.0 potassium phosphate buffer to remove extra-cellular or loosely bound sensitiser.

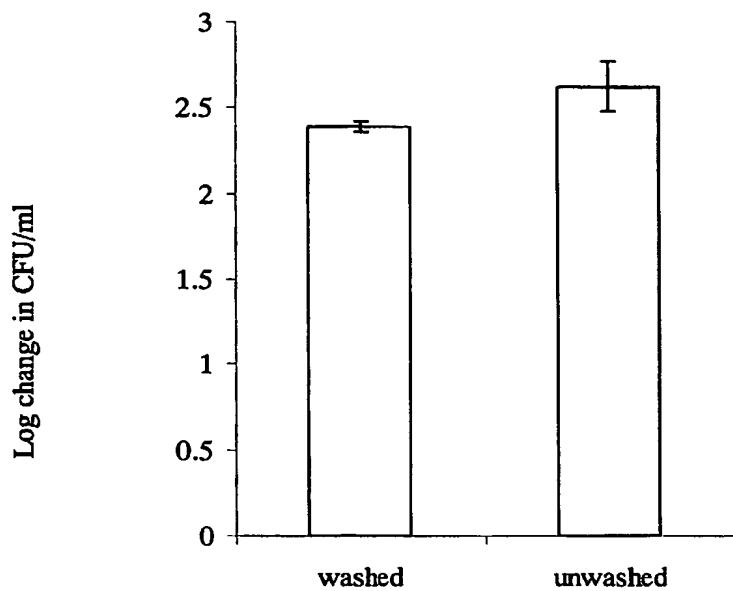


Figure 10 Log change in CFU/ml of *E. coli* cells incubated with 10 μ M tetra butyl phenothiazine. Cells were washed twice with 0.1M pH7 potassium phosphate buffer. Illumination used laser light (664nm) at 0.1W for 4 minutes.

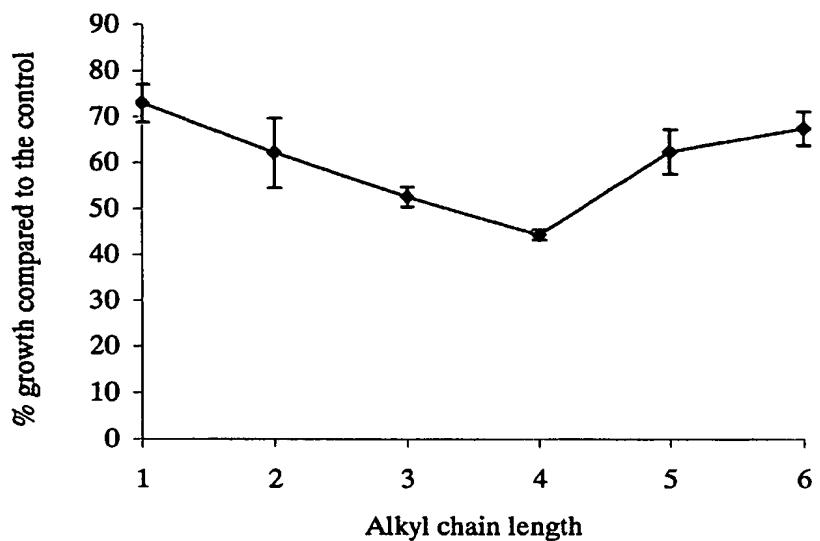


Figure 11 Percentage growth of a culture of an *E.coli* culture as compared to a control when 10 μ M phenothiazine was included in the growth media. Incubation was carried out in the dark at 37°C for 6 hours. Measurements based on apparent turbidity at 550nm.

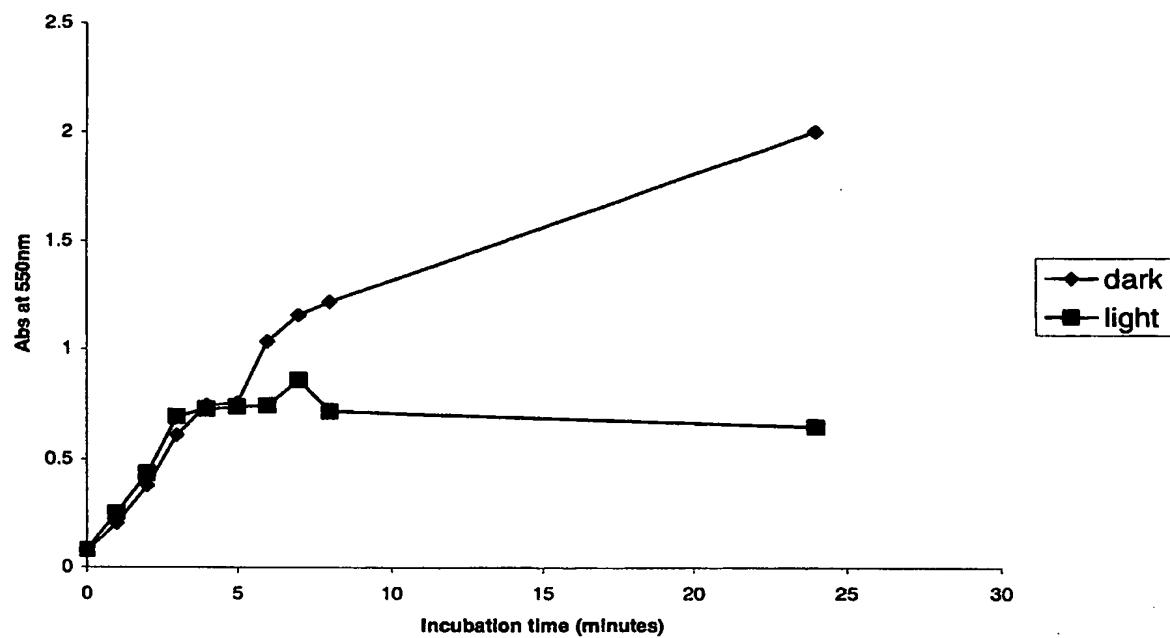


Figure 12 Change in absorbance of an *E.coli* culture grown in the presence of 10 μ M tetra butyl phenothiazine in the light and in the dark

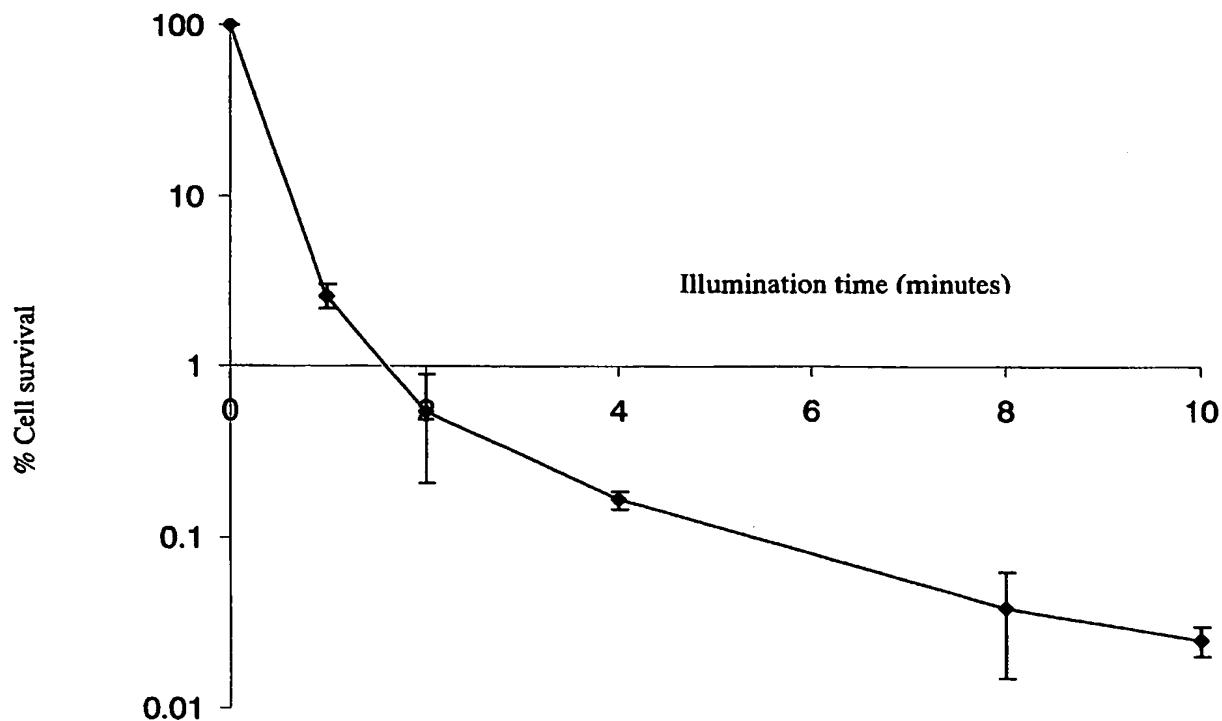


Figure 13 Percentage cell survival of *P.aeruginosa* following incubation with 10 μ M tetra butyl phenothiazine. Illumination was with laser light (664nm) at 0.1 W.

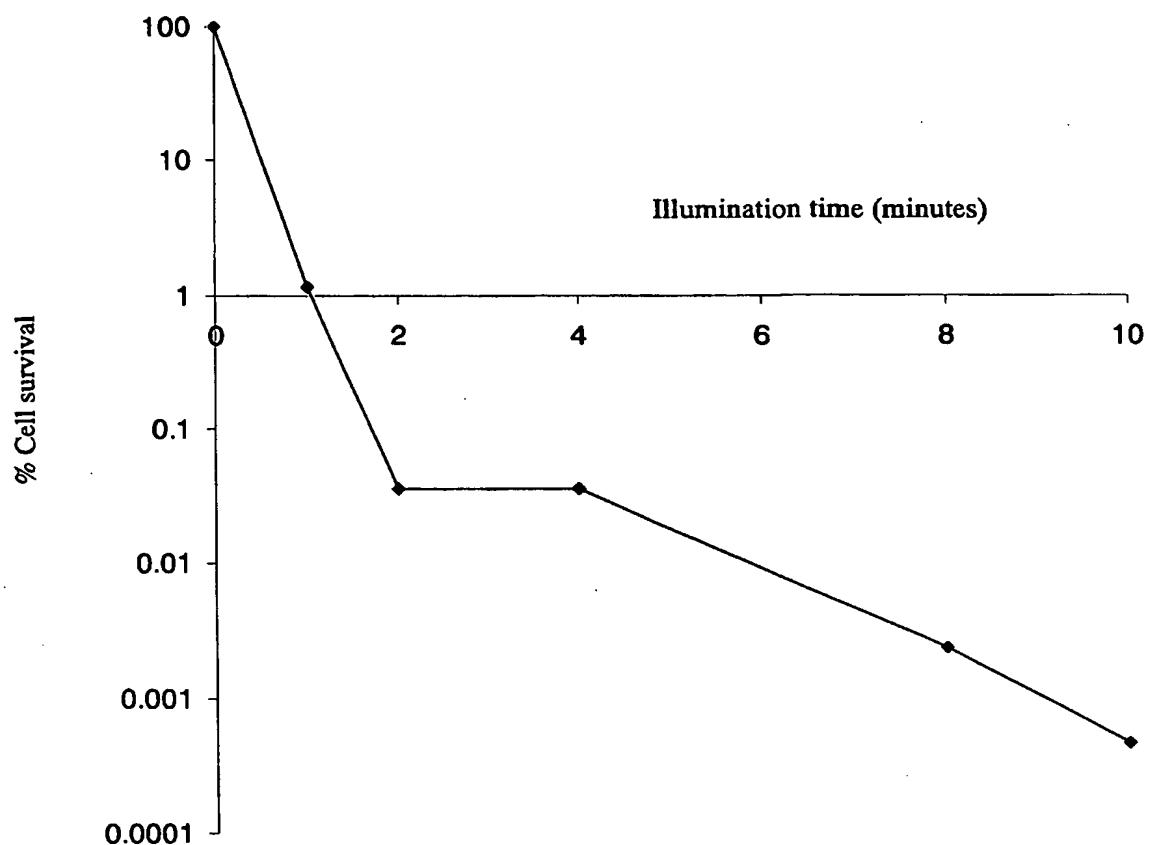


Figure 14 Percentage cell survival of *S. aureus* following incubation with 10 μ M tetra butyl phenothiazine. Illumination was with laser light (664nm) at 0.1 W.

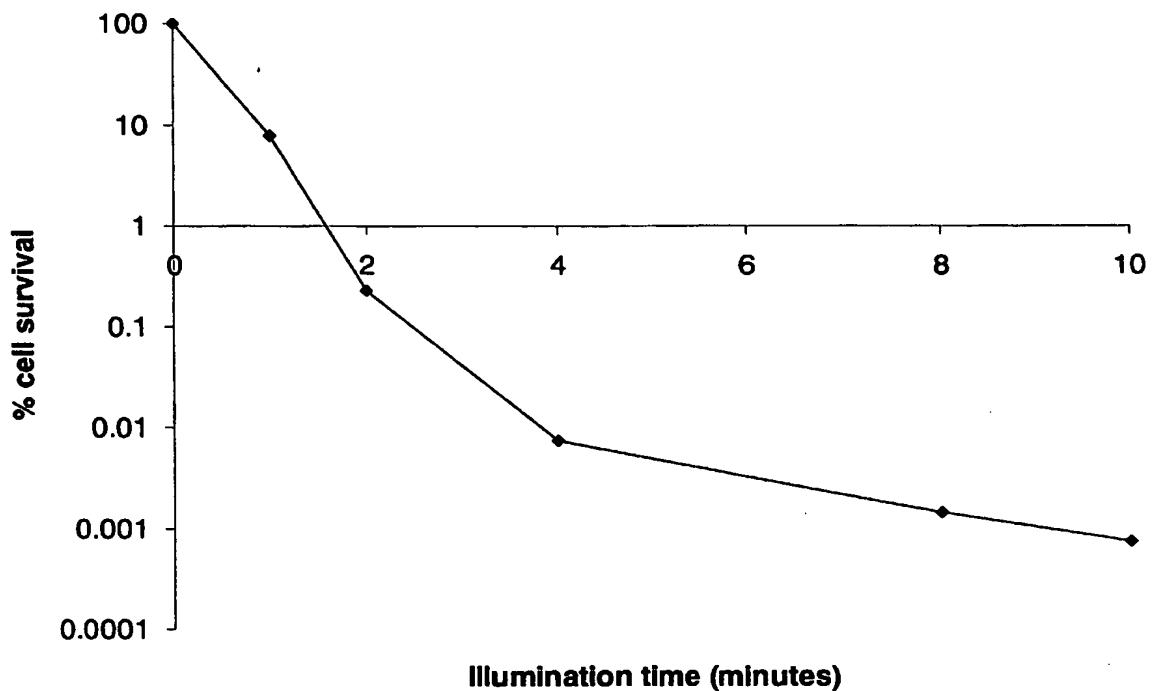


Figure 15 Percentage cell survival of MRSA following incubation with 10 μ M tetra butyl phenothiazine. Illumination was with laser light (664nm) at 0.1W

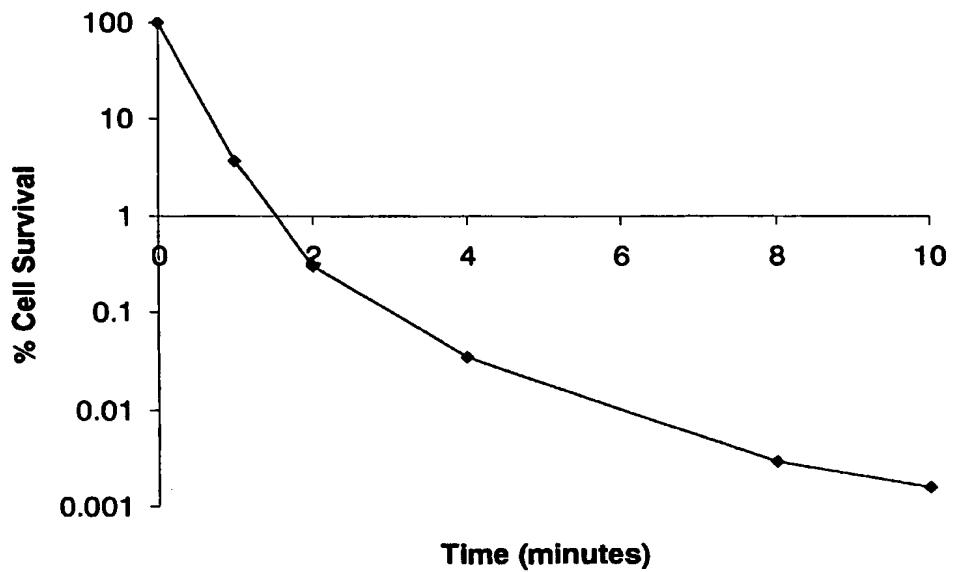


Figure 16 Percentage cell survival of *C. albicans* following incubation with 10 μ M tetra butyl phenothiazine. Illumination was with laser light (664nm) at 0.1W

Figure 17**Protocol:**Drug applied topically, dose = 5.79 μg (20 μl at 0.5mM)Applied light dose = 25J/cm² (30mW/cm² for 831sec)

1	PHP (i.v.) 8.35 $\mu\text{mol/kg}$ 24h drug to light interval (solar simulator)
2	PHP(i.v.) 8.35 $\mu\text{mol/kg}$ 2wk drug to light interval (solar simulator)
3	Butyl phenothiazinium drug only for 30min
4	24h ROOM LIGHT + Butyl phenothiazinium
5	24h ROOM LIGHT
6	24h DARK + Butyl phenothiazinium
7	24h DARK
8	Butyl phenothiazinium 30min drug to light interval (660 \pm 15nm)
9	Butyl phenothiazinium 30min drug to light interval (solar simulator)
10	Butyl phenothiazinium 24h drug to light interval (solar simulator)
11	Butyl phenothiazinium 7 days drug to light interval (solar simulator)
12	Butyl phenothiazinium 14 days drug to light interval (solar simulator)

